

DESCRIBING THE UNSPEAKABLE: PSYCHEDELIC COMMUNICATION TECHNOLOGIES AND THE DEVELOPMENT OF A POSTHUMAN LANGUAGE

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ABSTRACT

Over the last three decades, the renaissance of interdisciplinary research into psychedelic drugs has challenged the Cartesian notions of subjectivity and identity that have endured throughout modernity. But as work in this field reaches new degrees of complexity, the limitations of verbal and textual language are presenting barriers to conventional forms of scholarship. Across the disciplines, qualitative researchers mapping the subjective dimensions of the psychedelic experience, both in themselves and in others, must grapple with the ineffable nature of these transpersonal states of consciousness. To address these roadblocks, this paper introduces a new way of thinking about the neurological and phenomenological effects of the classic psychedelics DMT, LSD, and psilocybin. By interpreting neuroscientific research on these compounds using ideas from Gilles Deleuze and Felix Guattari's *Capitalism and Schizophrenia* series, I argue that they can be understood not only as spiritual sacraments, psychoactive molecules, and healing medicines, but also as communication technologies that prime the human brain for higher-dimensional forms of language production. I begin by describing the effects that psychedelics have on normal human brain functioning, with an overview of contemporary neuroscientific research. Next, I introduce Deleuze and Guattari's concepts of *detrterritorialization* and *stratification*, which I argue can bring the subjective and empirical dimensions of the psychedelic experience together in a single descriptive framework. After a brief overview of contemporary psychedelic philosophy, I conclude by exploring how these molecules are playing a role in the development of multisensory (and posthuman) forms of language.

doi: 10.5325/jpoststud.4.2.0166

Journal of Posthuman Studies, Vol. 4, No. 2, 2020

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KEYWORDS

Posthumanism, psychedelics, philosophy, consciousness, neuroscience

As the human species enters the third decade of the twenty-first century, we find ourselves poised between two rapidly accelerating processes: the development of technological capitalism and impending environmental collapse. In this urgent moment, novel technical developments such as brain–computer interfaces, advanced psychopharmacology, and genetically modified foods are blurring the boundaries that have separated the human and nonhuman domains throughout modernity. One of the most significant forces in this species-wide reorientation of identity and subjectivity has been the renaissance of interdisciplinary research into psychedelic drugs, which are being reevaluated for their positive and therapeutic role in the areas of mental health (Hendricks et al. 2015), addiction (Daniel and Haberman, 2017), and spiritual experience (Griffiths et al. 2006). While this scientific work is undoubtedly important, qualitative researchers in the humanities and social sciences (Gaia, 2019; Slattery, 2015; Sjöstedt-H, 2017) find themselves in the unenviable position of having to slot these transpersonalⁱ experiences (which are often described as ineffable) into the rational, linguistic molds of traditional scholarship.

To bypass these roadblocks, this paper introduces a new way of thinking about the neurological and phenomenological effects of the classic psychedelics, namely the indole hallucinogens DMT, LSD, and psilocybin. By interpreting neuroscientific research on these compounds with ideas from Gilles Deleuze and Felix Guattari’s *Capitalism and Schizophrenia* series, I argue that they can be understood not only as spiritual sacraments, psychoactive molecules, and healing medicines, but also as *communication technologies* that prime the human brain for higher-dimensional forms of language production. I begin with an overview of contemporary psychedelic neuroscience and describe the effects that these molecules have on normal human brain functioning. Next, I introduce Deleuze and Guattari’s concepts of *deterritorialization* and *stratification*, which, I argue, can bring the subjective and empirical dimensions of the psychedelic experience together in a single descriptive framework. After a brief overview of contemporary psychedelic philosophy, I conclude by exploring how these molecules are playing a role in the development of multisensory (and posthuman) forms of language.

PSYCHEDELIC NEUROSCIENCE

In 2014, the Centre for Neuropsychopharmacology at Imperial College London published “The Entropic Brain Theory,” one of the most influential papers in

the current wave of psychedelic research. Led by Dr. Robin Carhart-Harris and his team, the paper draws on a body of neuroimaging work carried out with the psychedelic *psilocybin*² to propose a new theory for understanding states of consciousness in the human brain. The core hypothesis of this “entropic brain theory” is that the “quality” of any state of conscious brain functioning depends on the overall entropy³ of the cerebral system (Carhart-Harris et al. 2014, 1). Put simply, the higher the entropy present in a system, the higher the level of randomness observable in it (Carhart-Harris et al. 2014, 1). As described by Carhart-Harris and his colleagues, the psychedelic experience is “a prototypical high-entropy state of consciousness” that weakens a subject’s perception of ego-integrity (2014, 1–2). The paper points to the large number of spontaneous insights about “self” or “nature” that can be found in the literature on psychedelics (Sandison and Whitelaw, 1954; Torda, 1969; Cohen, 1972; Grof, 2009), including reports of “ego-dissolution” and “disintegration” that occur when the brain is measured in a state of “criticality” between order and disorder (Carhart-Harris et al. 2014, 3).

The research team based their report on quantitative data obtained from a series of ASL (arterial spin labeling), BOLD (blood oxygenation level dependent), and MEG (magnetoencephalography) imaging studies that respectively measured levels of blood perfusion, oxygenated hemoglobin, and electromagnetism throughout the brain when the psilocybin molecule was being metabolized. During these measurements, Carhart-Harris’s team noticed a shift in an area of the brain called the default mode network (DMN). Initially proposed by Raichle (2015), the DMN is a pattern of blood flow, glucose metabolism, and oxygen consumption that is most active when the brain is in a resting state, not involved with any goal-oriented task or behavior. Subsequent neuroscientific work has correlated several psychological states with heightened DMN activity, including self-referential processing, rumination, autobiographical recollection, and mind-wandering (Carhart-Harris et al. 2014, 10). In their psychedelic studies, the Imperial College team noted that the administration of psilocybin into the brain resulted in decreases localized to “high-level association cortices, including key regions of the DMN” (Carhart-Harris et al. 2014, 5). What distinguishes the DMN from other cognitive networks is its “functional centrality” in the brain; Carhart Harris et al. (2014) compare it to a “central orchestrator or conductor,” leading them to believe that the DMN might be “the physical counterpart of the narrative-self or ego” (5).

As telling as these early results are, anyone who has first-hand experience with a psychedelic compound knows that the phenomenon cannot be captured by poetic metaphor or empirical representation without residuum. Neither the analysis of electrical patterns in the brain nor the novel juxtaposition of words can adequately render the hyperspatial landscapes, titanic intuitions, and deep

spiritual insights that are experienced by a tripping subject. Communicating the experiential timbre of these conscious states in a way that is intersubjectively coherent requires a vocabulary that respects both the data being generated by science and the quality of the experiences themselves. To address this difficult task, I turn to the poststructuralist philosophy of Deleuze and Guattari, which can help bridge the gap between the observable and affective dimensions of the psychedelic experience.

THE PSYCHEDELIC PHILOSOPHY OF DELEUZE AND GUATTARI

In the two volumes of their *Capitalism and Schizophrenia* series—*Anti-Oedipus* (1983) and *A Thousand Plateaus* (1987)—Gilles Deleuze and Felix Guattari create a philosophical machine that challenges static identity in its variety of forms. Scholars such as Thornton (2018) have described Deleuze and Guattari as “resolutely anti-individualist” thinkers, who strive to show how the notion of *the individual*—in its political, psychological, and philosophical manifestations—is in fact “a deception, summoned up to obscure the nature of reality” (paragraph 4). Because of their resistance to ontological essences, Deleuze and Guattari’s language does not so much as outline an arborescent system of concepts and categories as it uses the medium of text to engineer functional linguistic “machines” that interfere with the linear trance sustained by the authorial voice.

Deleuze and Guattari use the term *detrterritorialization* to represent this boundary-dissolving semiotic process, and as a more abstract descriptor for the behavior and organization of matter. As described by the realist philosopher Manuel DeLanda (2006), the term refers to the way that material systems tend toward states where the degree of internal homogeneity between constituent elements and the relative sharpness of boundaries between these elements decreases (13). But the flight toward detrterritorialization is not the only tendency present in matter. Deleuze and Guattari note an inverse process of *territorialization* during which the spatial boundaries between the parts of a material system are sharpened and defined (DeLanda, 2006, 13). Put simply, the double movement of detrterritorialization and (re)territorialization is an immanent part of any terrestrial process, be it semiotic, social, or psychological.

Like most of the ideas in their philosophical toolbox, Deleuze and Guattari did not envision the de/(re)territorialization dynamic as a rigid moral framework or a rigorous scientific theory. The fluid language they use to describe this concept suggests that it functions as an intuitive tool for describing how systems ebb and flow between a nonlinear series of stable states: “assemblages swing between a territorial closure that tends to restratify them and a detrterritorializing movement that connects them to the Cosmos” (Deleuze and Guattari 1987, 337).



These highly abstract concepts make Deleuze and Guattari’s writing difficult to summarize and are one reason that their names have become synonymous with incomprehensibility. Indeed, not every reader will appreciate how Deleuze and Guattari forgo traditional literary conventions and cause their linguistic associations to melt together. But a psychedelic researcher accustomed to states of inner dissolution might find their ideas useful, especially when reaching for concepts that can capture the ecstatic and transpersonal nature of the psychedelic experience. The *Capitalism and Schizophrenia* series features swaths of psychedelic imagery which, like the molecules themselves, functionally unveil the fantasy of a stable and unified human subject. Most notably, Malins (2004) describes how Deleuze and Guattari conceive of the human body–mind complex as a “machinic assemblage,” defined by its connections with external systems such as energy flows, the genetic code, and the social sphere (84). We can explore this line of thought ourselves by considering how common drugs such as caffeine and sugar structure our daily subjective experience by encoding energetic signatures onto the primate nervous system. Through these stimulants, the human body becomes a little microcosm of industrial capitalism, a miniature machine where molecular substances are metabolized in predicable cycles of boom and bust, brief euphoric rushes followed by equal and opposite periods of depression and guilt. As McKenna (1993) describes in *Food of The Gods*, when high on stimulants, the primate body exists in a perpetual state of energetic debt, compatible with the tightly controlled social structures of “dominator societies” (170).⁴ At this point, it is becoming well known that psychedelics interfere with the addictive mechanisms that engineer desire in capitalist societies (Johnson et al. 2014; Belouin and Henningfield, 2018), but to fully unpack the implications of this idea, it will be useful to outline the mechanisms that Deleuze and Guattari provide for stratification, which describe not only the organization of social life, but also the way psychedelics interfere with human subjectivity and identity.

THE EDGE OF CHAOS: EXPLORING PSYCHEDELIC SUBJECTIVITY

According to Deleuze and Guattari (1987), stratification occurs on the Earth through an “abstract machine” that, when diagrammed, illustrates how deterritorialized matter and energy become a territorialized structure. This occurs through an act of *double articulation* that sees molecular intensities being locked into molar systems of organization (40–41). In the first articulation, a series of unstable particle flows is sorted into a category or group (40). This could be the sediment deposit that builds up at the end of a rushing river, or the electrical representations of sound waves and photons that gather in the sensory



processing lobes of the mammalian brain. After this initial sorting process comes the second step, during which a *form* (or code) is imposed upon the sorted data, regimenting the molecules into a stable *structure* (40–41). Depending on the matter in question, this second articulation can result in a variety of stratified structures: the distributed layers that correspond with the geological ages of the Earth, or the nested series of systems—the digestive system, the circulatory system, the five distinct sensory systems—that come together in the “stable state” of human subjectivity.

If we recall the neurological research of the team at Imperial College, we will find that this philosophical language corresponds quite well with what is going on empirically. Remember that the human brain primed by a tryptamine psychedelic like psilocybin exists in a measurable state of criticality, between order and disorder (Carhart-Harris et al. 2014). As the Imperial College team demonstrated, the administration of psilocybin into the brain creates a heightened state of *entropy* resulting in decreased activity to the DMN, a neural pattern responsible for self-referential and ruminative psychological states (Carhart-Harris et al. 2014).

With these ideas in mind, one could argue that what psychedelics generally do is deterritorialize the human brain and by extension, the stratified networks that underlie our sense of bounded individuality. In an interview with cultural theorist Erik Davis, Manuel DeLanda provides a philosophically vivid description of the way psychedelic compounds affect the composition and makeup of identity. He compares the psychedelically stimulated brain to a molecular system (a body of water), describing how its state of energetic excitation affects its self-organizing dynamics. When a system is solid or crystalized (like a block of ice), “its dynamics are completely uninteresting”; it is stable, static, and uneventful and doesn’t move around very much (DeLanda 2000, Section 7). When a system is gaseous (like a cloud of steam), it is also uninteresting, for it is literally “all over the place” and remains too chaotic and disorganized to display dynamic, self-organizing behavior (DeLanda 2000, Section 7). However, when a system is liquified, poised on the “edge of chaos” that lies between order and disorder, a pulsating network of connections becomes visible.

Think of the self-organizing processes that occur naturally in freestanding bodies of water: the whirlpools that form at the bottom of kitchen sinks when they are drained, or the thunderstorms that develop over ocean waters. According to DeLanda, liquid states in nature (in both the literal chemical sense, and the poetic sense of being “not too rigid or too loose”) function as natural computers in which self-organizing structures, attractors, and bifurcations can form (DeLanda 2013, Section 7). For DeLanda, the brain on psychedelics is a brain made liquid. The psychedelic trip liquifies linguistic and intentional connections between neurons,

causing information to rush to the brain and allowing it to think concepts it was not able to previously (Section 8). However, by taking too much of a substance, the subject undergoes a “second bifurcation,” becoming gaseous as its self-organization begins to diffuse into gaseous nothingness (Section 8).

These poetic images touch on what is perhaps the core psychedelic mystery: where do “you” go when your neural networks are deterritorialized by psychedelics? Is the experience solely psychological, or does it literally transport you to a freestanding dimension of alien sentience? DeLanda is of the opinion that the psychedelic experience does not provide access to any preexisting “higher state” but is temporarily built in the brain the moment it is destratified (Section 9). In *Alien Information Theory*, computational neuroscientist Andrew Gallimore offers us a more open-ended possibility, arguing that certain molecules (most specifically the endogenous compound NN-DMT) prime the brain for contact with a higher dimensional “hyper-grid” that displays an aesthetic signature and logical consistency unexplainable in terms of normal human brain functioning (Gallimore 2019). Peter Sjöstedt-H (2017), a pioneer in the developing field of psychedelic metaphysics, provides something of a middle ground between these two positions. Drawing on the philosophy of Alfred North Whitehead, he defines the psychedelic experience as a “vertical, lateral and temporal integration of sentience,” a kind of omnidirectional consciousness expansion that opens a subject up to their virtual (or future) potentials, their past memories, and the lateral world of objects and entities parallel to them (Sjöstedt-H 2017, xx).

Despite their diverging theories and distinct conclusions, all these definitions share a basis in *communication*; that is, they are concerned with the way psychedelics augment, transport, and convey flows of information between points in (and perhaps beyond) space–time. Although this area of research is still in its infancy, the fact that cerebral mechanisms related to self-referentiality and description are implicated during psychedelic experiences partially explains why they are so difficult to describe. If we think of psychedelics in this way, as communication technologies that deterritorialize flows of information within the brain, we can explore how they are contributing to the development of posthuman forms of language.

**PSYCHEDELICS, CONSCIOUSNESS, AND THE DEVELOPMENT
OF A POSTHUMAN LANGUAGE**

Although the developing posthuman condition (Braidotti 2019; Ferrando 2019) is unprecedented in its complexity, it is not wholly unique. The integral philosopher Debashish Banerji (2016) argues that the philosophers of conscious evolution who emerged across the world at the turn of the nineteenth century

grappled with the transformation of human subjectivity in the face of rapid technological advancement, much as we are doing today (267). Banerji (2016) identifies a common link in the thought of Henri Bergson, Sri Aurobindo, and Pierre Teilhard de Chardin that he labels “cosmogenetic individuation,” the cosmic tendency toward increasing self-organization and complexity that manifests within individual human beings as their awareness and consciousness widen (66). As Banerji describes, Pierre Teilhard de Chardin referred to this process as “christogenesis,” a becoming individual of the cosmos and becoming cosmic of the individual that would culminate in a collective “omega point” of divine unification on Earth (266).

Similarly, the Indian philosopher Sri Aurobindo (2005) describes the terrestrial evolutionary drama as a process of unveiling, where the divine force of Purusha (conscious being) spirals out of a state of forgetfulness (inconscience), unwinding through successive states of awakening that come with the ability to transform Prakriti, or nature.

In the present moment, these kinds of ideas might come across as wishful—even dangerous—fantasies. But alternatively, they might help to reorient the developmental vector of humanity toward more malleable and less destructive ends. Apart from an increase and expansion of consciousness (which on the collective level involves the construction of shared languages and epistemologies), what other process is powerful enough to address the multifaceted issues of ecological collapse, technological runaway, and information overload that we are currently faced with as a species?

Banerji (2016) argues that if a call for consciousness expansion is to be anything more than a “romanticism that wills its self-exile and eventual obsolescence,” it must involve an intimate engagement with technology (276). Although Banerjee does not describe this engagement specifically, psychedelics are an ideal candidate for the kind of technology he is speaking of. By making the brain permeable to new kinds of information and loosening its linguistic and self-referential connections, these psychedelic technologies might be used as “virtual probes” for the development of new, multisensory forms of human communication.⁵

In his legendary lectures, Terence McKenna envisioned this possibility, describing the linguistic field perturbed by tryptamine psychedelics as something that is visibly beheld. In these realms of visible language, the subject–object split implicit in verbal representation disappears entirely and “the project of communication becomes a high-speed sculpture in a conceptual dimension made of light and intentionality” (McKenna and Ayahuasca Community 2018, paragraph 3). Indeed when combined with technologies related to translation and voice recognition, implantable brain–machine interfaces, and immersive virtual reality environments, the linguistic potentials revealed to the tripping

subject might work as an inspirational motor for the construction of communication technologies that functioned in a manner comparable to telepathy:

It is possible to imagine a virtual reality that was driven by a speech-operated synthesizer where the various parts of ordinary speech—adjectives, modifiers, subjects, and objects—were interpreted by the cybernetic environment as topological manifolds of various shapes, so that speech would then generate a visibly beheld topology. (McKenna 2018, paragraph 3)

Although this might sound farfetched, these kinds of linguistic projects are already being undertaken in disparate fields of art, entertainment, and scholarship. For example, author and linguist Dianna Reed Slattery recently published her fascinating attempts to map “Glide,” an alien language that was delivered to her during a series of powerful psychedelic experiences. As can be seen on Slattery’s *You Tube* channel, the Glide language is based on a series of flowing glyphs that can be rendered visually using a computer software called *LiveGlide* (Slattery 2015). Based on a ternary logic that embraces paradox and multiplicity, Glide signs “move and morph” with aspects of color, texture, velocity, acceleration, and the proximity of signs to one another, all contributing to a sequence’s overall meaning (60).

A more conventional but no less impressive example is Andromeda Entertainment’s upcoming video game *SoundSelf*, “an ecstatic meditation experience” that allows players to navigate a world of kaleidoscopic shapes and alien sounds in a fully immersive virtual reality setting, using only the tone of their own voice (2020). What’s more, creator Robin Arnott directly attributes the idea for this game to an experience of oneness occasioned by LSD (Michaelson 2017).

While there is no simple remedy for the crises humanity is facing, the paradigm-shifting events that will unfold over the coming decade will force us to communicate with one another in entirely new ways. Bridging the gaps between the balkanized camps of our sociopolitical landscape requires forms of communication that can render nuance, situatedness, and contradiction in a more effective way than words alone. Although the examples listed above are still in their embryonic state, they point to a fascinating vector of research and development into new channels of human communication. Of course, these technologies carry with them the potential for invasive exploitation, a necessary line of critique that goes beyond the scope of this paper. But if the transcendent experiences being undergone by a growing number of people are to play a significant role in potential posthuman futures, they must be widely communicable, lest they become another hollow meme in an oversaturated media environment.



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NOTES

1. The term *transpersonal* refers to states of consciousness where a subject's sense of self goes beyond the scope of their narrow "ego identity" and begins to encompass deeper and wider aspects of life, psyche, and cosmos.
2. Psilocybin is a naturally occurring psychedelic prodrug, best known as the active ingredient in "magic mushrooms."
3. Originally drawn from the field of information theory, entropy is defined here as "a dimensionless quantity that is used for measuring uncertainty about the state of a system" (Carhart-Harris et al. 2014, 1).
4. In his recent writing on metahumanism, Jamie del Val argues that the quantification, appropriation, and spatialization of human perception is foundational to the epistemological regime of Empires and has only intensified in the present "algoricene" of cybernetic surveillance and control (2018).
5. When applied technologically, psychedelics have the potential to facilitate the process that the metahumanist artist and philosopher Jamie del Val terms *ontohacking*, the practice of "creatively and critically redefining the ontological aspects of technologies" in order to operate on the "perceptual frames" that sustain Cartesian subjectivity (2018, p. 187).

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